CFP2000 Result

Advanced Micro Devices

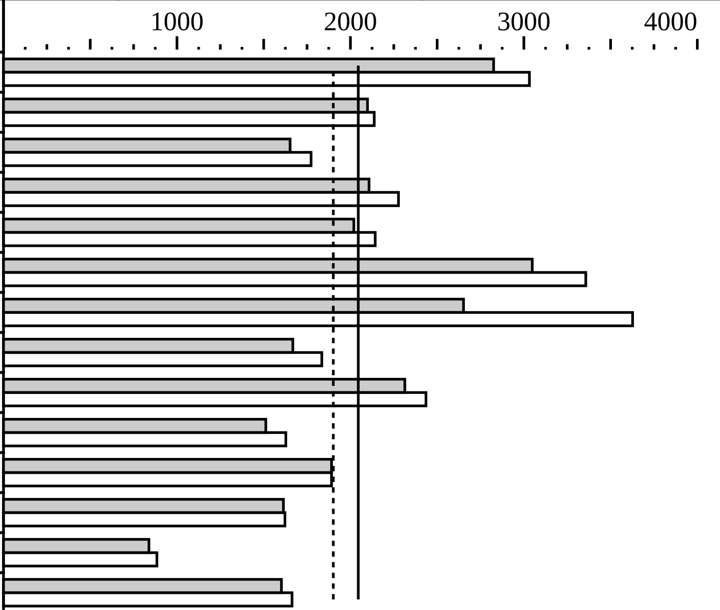
TYAN S2865 K8E Tomcat, AMD Opteron (TM) 152

SPECfp2000 = 2045

SPECfp_base2000 = 1901

SPEC license #:	Tested by:	Test date:	Hardware Avail:	Software Avail:
49	AMD, Austin, TX	Jul-2005	Aug-2005	Aug-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	56.6	2826	52.8	3032
171.swim	3100	148	2099	145	2137
172.mgrid	1800	109	1652	102	1773
173.applu	2100	99.7	2107	92.2	2277
177.mesa	1400	69.3	2020	65.3	2143
178.galgel	2900	95.1	3048	86.4	3357
179.art	2600	98.0	2652	71.7	3627
183.equake	1300	77.9	1668	70.8	1835
187.facerec	1900	82.1	2314	78.0	2436
188.ammp	2200	145	1512	135	1628
189.lucas	2000	106	1891	106	1891
191.fma3d	2100	130	1614	129	1623
200.sixtrack	1100	131	838	124	884
301.apsi	2600	162	1602	156	1663



Hardware

CPU:	AMD Opteron (TM) 152 (939-pin)
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	4x512 MB, DDR400 CL2.0
Disk Subsystem:	IDE, Western Digital WD2000JB, 7200 rpm
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 (SP2) for AMD64
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.1
File System:	Linux/ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by AMD

 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
 +ACML  means -L/opt/acml2.5.1/pathscale64/lib -lacml,
        which causes linking with AMD Core Math Library V2.5.1

 Baseline optimization
   C programs:       -Ofast -WOPT:mem_opnds=on +FDO
   Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
 Portability Flags:
   178.galgel:  -fixedform

Peak Tuning:
 168.wupwise:   -Ofast -LNO:prefetch_ahead=5:prefetch=3
                -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
                -IPA:linear=on:plimit=50000:callee_limit=5000
                -INLINE:aggressive=on
```

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SPEC license #: 49	Tested by: AMD, Austin, TX	Test date: Jul-2005	Hardware Avail: Aug-2005	Software Avail: Aug-2005

Notes/Tuning Information (Continued)

```
171.swim:      -Ofast -LNO:fusion=2 -m3dnow
172.mgrid:     -O3 -LNO:fusion=2:blocking=off
               -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3
               -CG:gcm=off:cflow=off -m3dnow
173.applu:     -Ofast -CG:local_fwd_sched=on
               -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
               -OPT:ro=3 -TENV:X=3
177.mesa:      -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
178.galgel:    -Ofast -OPT:fast_complex=on +ACML
179.art:       -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32
183.equake:    -Ofast -CG:load_exe=2 -OPT:treeheight=on -WOPT:mem_opnds=on
               -m32 +FDO
187.facerec:   -Ofast -OPT:IEEE_NaN_Inf=off:ro=3 -LNO:fusion=2
               -IPA:plimit=1500 +FDO
188.ammp:      -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
               -fno-math-errno -TENV:X=4 +FDO
189.lucas:      basepeak = true
191.fma3d:     -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
               -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack:= -O3 -OPT:Ofast:Olimit=6000 -fno-math-errno -CG:load_exe=1 +FDO
301.apsi:      -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0
```

The tested system can be assembled using a standard ATX footprint, an Antec True 550 Watt EPS12V power supply, and a PCI or PCIe graphics card.
All memory slots were populated with Corsair CMX512-3200XL.
Memory timings manually set in BIOS: CAS=2, TRCD=2, TRAS=5, TRP=2
BIOS version 1.01